OBJECTIVES: The study examined: a) the relationship between pharma care and health outcomes, b) the influence of expenditure on drugs to the level of expenditure on other forms of care c) the impact of providers on the level of pharma expenditure. **METHODS:** We conducted linear multiple regression analysis with pharma expenditure as independent variable, and dependent variables such as clinical indicators and expenditure of other categories. Also, we conducted analyses with number of physicians and pharmacists as independent variables and pharma expenditure as dependent. Analyses were conducted for all Eurozone countries (2003-2011). All tests of statistical significance were two-tailed, and p-values of less than 0.05 were considered significant. **RESULTS:** Increased total per capita outpatient pharma expenditure (in US $ PPP's) by 10% was related to increase in life expectancy: a) at birth for men by 0.41% (p=0.07), b) for men 65+ by 2.35% (p=0.004), and c) at birth for women by 0.37% (p=0.03). Moreover, increased public pharma expenditure as a % of total current public expenditure by 10% was related to a reduction of public current health expenditure (as a % of GDP) by 2.8% (p<0.001). A 10% increase of total pharma expenditure as a % of total current health expenditure as a % of GDP, was related to a reduction of total current health expenditure as a % of GDP by 3.3% (p=0.045). Finally, an increase in the number of pharmacists/100,000 population by 10% was related to an increase of total per capita pharmaceutical expenditure by 0.93% (p=0.07). **CONCLUSIONS:** Overall drug expenditure is positively related to population health and negatively connected with the level of total health expenditure, a finding that should influence political decisions on public insurance coverage. The accuracy of our results will be further enhanced by similar research in the future, when longer time series data are available.

PHP81

BIOSIMILAR AND ORIGINATOR BIOLOGIC PRICING DYNAMICS IN EMERGING MARKETS

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OBJECTIVES: To characterise pricing dynamics between originator biologics and biosimilar products in a number of emerging markets, namely Brazil, China, India, Mexico, Russia, South Korea and Turkey. **METHODS:** Prices for the products concerned were based on calculations of ex-manufacturing prices. Prices at time of biosimilar launch and from the most recent time point available were selected for the respective biosimilar and originator products, and converted to a price-per-unit basis. Average prices were then calculated per brand name, where more than one strength or formulation of a product existed. In addition, primary and secondary research were utilised to obtain further manufacturer and/or retail-level price data where possible. **RESULTS:** At the time of launch, biosimilar products in emerging markets exhibit a manufacturer-level price representing an approximately 30% discount, on average, over that of the originator biologic. There are a number of exceptions, with evidence that some biosimilar products are priced at a mere 40% of the originator at time of launch. The more typical 30% differential appears to narrow significantly with time, as evidenced across a number of markets that have seen activity in the first generation of biosimilar products (e.g., erythropoietins, granulocyte colony-stimulating factor, etc). **CONCLUSIONS:** At time of launch, the pricing dynamic between originator biologics and their respective biosimilars in emerging markets appears to mimic the scenario which has thus far been observed in Europe. However, there are exceptions, with some products associated with significantly larger discounts at time of launch in certain emerging markets. Over time, there tends to be dramatic price erosion for both originators and biosimilars as a function of the original originator price. This erosion is driven by competitive entry into the market of subsequent biosimilars, coupled with widespread use of tendering in the public markets.

PHP82

EVALUATION OF THE POLICIES IMPLEMENTED TO MONITOR PRESCRIPTION AND REDUCE PHARMACEUTICAL EXPENDITURE AT THE UNIVERSITY GENERAL HOSPITAL OF PATRAS, GREECE

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OBJECTIVES: The University Hospital of Patras (GPNP) has implemented a series of prescription monitoring measures that aim at reducing the hospital's pharmaceutical expenditure. The objective of this study was to evaluate the results of those policies. **METHODS:** Analysis of the 2011 and 2012 economic data of the GPNP on purchase and consumption (in terms of quantity and value) of pharmaceutical products, both in the inpatient and outpatient settings, was conducted. Data on the total number of outpatient prescriptions and high-cost drugs were also analyzed. The subgroup of high-cost drugs was further investigated, by performing a breakdown analysis of the expenditure of high-cost drugs by disease area. **RESULTS:** The cost containment measures implemented by the GPNP (which include, among others, the development of guidelines on rationalizing the use of pharmaceutical products, and a hospital formulary, which took into consideration both clinical and cost data), have resulted in a reduction of the total pharmaceutical consumption by 11.5% in 2012 (€29.4 million) compared to 2011(€33.2 million). Although total outpatient prescriptions and the related quantity of pharmaceutical products prescribed were increased by 8.1% and 10.5%, respectively, the pharmaceutical cost of outpatient care was reduced by almost 28%, indicating a significant increase in the prescription of lower cost pharmaceuticals. Indeed, the high-cost hospital medicines prescribed to outpatients was reduced by almost 21% in 2012. In the inpatient setting, the total expenditure on high-cost hospital medicines was reduced by 12.9%. The expenditure on cytostatic drugs, which accounts for more than 70% of the total expenditure for high-cost drugs in the inpatient setting, was reduced by almost 10%, while the number of patients hospitalized was reduced by only 1.6%. **CONCLUSIONS:** The policies implemented by the GPNP were successful in reallocating pharmaceutical budget towards more innovative medicines in order to ensure patients' access to new therapies.

PHP83

COST-OUTCOME DESCRIPTION OF CLINICAL PHARMACIST INTERVENTIONS IN A UNIVERSITY TEACHING HOSPITAL

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OBJECTIVES: Clinical pharmacist interventions are actions which aim to improve a patient's pharmaceutical care. The primary objective of this study is to estimate the cost savings achieved by clinical pharmacists through the prevention of adverse drug events (ADE) in a hospital setting. Previous studies have estimated the benefit of these interventions over shorter periods of time and in specific hospital areas. This study will encompass a longer time period and a complete hospital system. **METHODS:** This study was a retrospective analysis of a database detailing pharmacist interventions on patient therapies at Cork University Hospital. Period examined was from January 2012 to December 2012 inclusive. Cost savings were calculated based on the probability that an ADE would have occurred in the absence of the proposed pharmacist intervention (Average cost of ADE = €970). Input costs were calculated based on the time required for pharmacists (n = 17) to enact interventions. One way sensitivity analysis incorporated published ranges for intervention time, pharmacist salary and probability an ADE would have occurred. Alternative costs for an ADE were also included in analysis. Cost savings are from the perspective of the health care institution. Costs are presented in 2012 € values. **RESULTS:** A total of 4,247 interventions were documented. Base case analysis resulted in net cost benefit of €590,000 per annum and a cost benefit ratio of 10.4:1. Cost savings of €650,000 were generated and the cost of providing the service was estimated at €60,000. Sensitivity analysis resulted in cost benefit ratio varying from 5.2 – 64.8 (minimum – maximum). The most prevalent pharmacist intervention was the identification of drug omissions (n=1820, 42.9%). **CONCLUSIONS:** Cost benefit ratio remained positive in all situations examined. This study has added to the body of evidence that clinical pharmacist interventions are cost effective over extended time periods and entire hospital settings.

PHP84

DIFFERENTIAL DISCOUTING: CAPTURING THE VALUE OF LIVING LONGER AND BETTER

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OBJECTIVES: Discounting future cost and health benefits is standard in pharmacoeconomic evaluations. Using different discount rates for costs and benefits remains controversial, although there is a case for lowering the health effect discount rate as the general population benefits from better health over a longer period of time. The implications of differential discounting on the likely duration of health benefits was assessed. **METHODS:** An extensive literature review sourced current discount rates for European countries, including the justification for those rates where available. Using a specific example (mifamurtide [Mepact, Takeda] for the treatment of osteosarcoma) the time to loss of health benefits for equal and differential discount rates using a UK reference case was assessed. **RESULTS:** Like most of Europe, the UK National Institute for Clinical Excellence (NICE) has been using a discount rate of 3.5% for both costs and health effects. However, it has recently adopted a differential reference case where health effects are sustained over a period of 30 years or more: 1.5% for health effects and 3.5% for costs. Taking the example of mifamurtide and using the original rate of 3.5% for health effects, all benefit would be discounted away after just 22 years. By adopting the lower rate, the effects will not be discounted away until 49 years after treatment. In this case, the discount rates used to for mifamurtide are particularly sensitive because all costs are borne in the first year, yet benefits of treatment can be over a patient's lifetime. **CONCLUSIONS:** Adopting differential discounting rates reflects the potential long-term benefits of new health care technologies. However, most European countries, with the exceptions of Belgium, The Netherlands and now the UK in specific circumstances, continue to use the same discount rate for costs and health effects, thereby potentially undervaluing the long-term benefits current and new treatments.

PHP85

ADVANCED BUDGET NOTIFICATION (ABN): IS THERE A WIN:WIN FOR MANUFACTURERS AND PAYERS GIVEN THE CURRENT AUSTERITY MEASURES ACROSS THE EU

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OBJECTIVES: The mature health economies across the EU are severely fiscally challenged, and yet manufacturers of innovative medicines are where the legislation permits expected to give a notifiable 'warning' of expected budget impact. A survey was undertaken amongst payers to ascertain their real world expectations in terms of advanced warning and how realistically a collaborative approach to access could be achieved. **METHODS:** Manufacturers of innovative technologies are where legislation permits advised to supply payers and budget holders with information that will assist the aforesaid bodies with sufficient information to decide on the managed entry of that technology; historically manufacturers are in two minds about the value of this process. A study was undertaken with payers as to their perceived interest and interaction with manufacturers who willingly entered into ABN. Payers at a regional and national level were interviewed to gauge their opinions. **RESULTS:** There appears to be a dichotomy of opinion amongst payers as to the value of the legislation; 'damned if you do, damned if you don't', however it clearly is in the interest of both parties to work together. Payers value the contact and information provision from Manufacturers, Manufactures seek to garner the approval of payers. **CONCLUSIONS:** The EU is in the worst economic depression since the 1930's, affordability is the key watchword. New technologies need to continue to be presented to payers in a manner which allows them to plan for fiscal pressure and service redesign.